

**DEPARTMENT**      **SEWER UTILITY**  
**FUND 72**

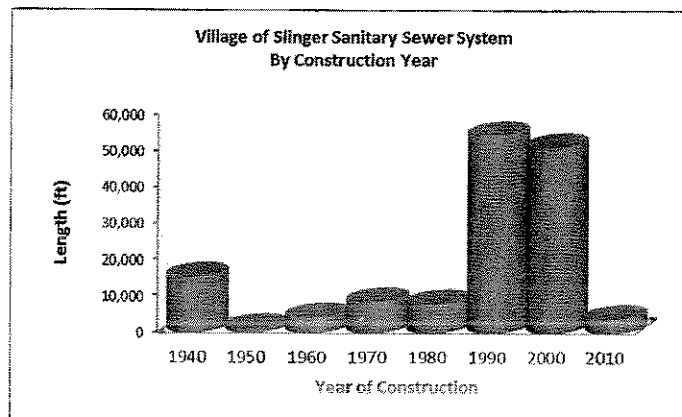
**Program Description**

**The Collection System**

The existing sanitary sewer system is made up of approximately 28 miles of gravity sewers ranging in size from 6 inches to 30 inches in diameter, 1.92 miles of forcemains, 3 lift stations and 735 manholes. The age, size and material making up the sanitary sewer system are as follows:

<b><i>Village of Slinger Sanitary Sewer System</i></b>		
<b><i>By Size</i></b>		
<b>Diameter (in)</b>	<b>Length (ft)</b>	<b>Percentage</b>
6	730.2	0.5%
8	104,102.4	70.6%
10	10,684.1	7.2%
12	9,768.1	6.6%
15	6,130.5	4.2%
18	6,159.3	4.2%
21	2,261.8	1.5%
24	5,782.3	3.9%
30	1,952.4	1.3%
<b>TOTAL</b>	<b>147,571.1</b>	<b>100.00%</b>

<b><i>Village of Slinger Sanitary Sewer System</i></b>		
<b><i>By Material</i></b>		
<b>Type</b>	<b>Length (ft)</b>	<b>Percentage</b>
PVC	118,417.8	80.3%
CLAY	25,850.1	17.5%
RCP	3,303.2	2.2%
<b>TOTAL</b>	<b>147,571.1</b>	<b>100.00%</b>



The Statistics of the three Village-owned lift stations are as follows:

- Hartford Road Lift Station, constructed in 1995 serving properties along Hartford Road
- Cedar Bluffs Way Lift Station, constructed in 2005 serving the easternmost area of the Village
- American Eagle Drive Lift Station, constructed in 2003 and upgraded in 2015. This station serves the area directly east of US 41.

The Sewer Utility also provides service to the Hilldale Sanitary District located along Hilldale Drive along the west side of Slinger. Hilldale Sanitary District is comprised of approximately 200 single family homes. All sewage from the district flows by gravity to a main lift station that is then discharged to the Slinger Treatment Plant through a 6-inch forcemain (4,122.8 feet long). Billing is based on the metered flows recorded at the main lift station.

The current WPDES permit contains both a phosphorus compliance schedule and a chloride compliance schedule that needs to be met to avoid violating the permit and regulatory enforcement.

Each of these schedules requires the Village to invest time and money in addressing these issues that are above and beyond the usual day to day operation and maintenance of the Village's collection system and wastewater treatment plant (WWTP).

The following lists some of the requirements that need to be met in regards to phosphorus and chlorides. All of these actions have a physical equipment cost and an engineering study cost associated with them.

1. Optimize the oxidation ditch for biological phosphorus removal. This will include work to modify the outer ditch aeration disks and an ORP probe for monitoring and control.
2. Evaluation of different chemicals to aid in removing phosphorus. Possible addition of an online phosphorus analyzer system that includes the analyzer, new chemical feed pumps, hookup of SCADA for control, etc.
3. Invest in upgrades to the Village's plow trucks to include a computer control of the salt application system that staff is able to test and calibrate along with the acquisition of brine tanks to pre-wet the salt that is applied to Village roadways. Chloride reduction will be a regulatory issue to be addressed in both the sewer utility and storm utility.
4. Updating the sewer use ordinance to further quantify pollutants.
5. Investigate, and the possible purchase of, an online chloride analyzer.

### **2016 Accomplishments**

- Work scheduled for October 17<sup>th</sup> for improvements at the Hartford Road Lift Station. This will include two new pumps and a different type of control monitoring device.
- Continued the multi-year manhole inspection program while doing more repairs in-house.
- Completed initial steps to optimize the oxidation ditch for biological phosphorus removal. This included work to modify the outer ditch aeration disks, adding new control points, changing chemical addition points, downsizing a chemical pump and adding an ORP probe for monitoring and control.
- Running a trial on a mixing system for the oxidation ditch that would continue to improve conditions for biological phosphorus removal.
- Switching process water from system distribution water to the use of ground water, no longer needing to purchase the water from the water utility.
- Continued the annual system cleaning.
- Populated data web based GIS system.
- Spot repairs and lining of clay sewer along Water and Elm St.
- Upgraded the Village's plow truck fleet to include measurable computer controls for the salting equipment along with the acquisition of brine tanks to pre-wet the salt that is applied to Village roadways. Chloride reduction will be a regulatory issue to be addressed in both the sewer utility and storm utility.
- Evaluated a different type of alum for chemical removal of phosphorus. Original plans had us trying a very expensive rare earth chemical (Sorbex) at the cost of \$4.85/gallon. Based on early results of the biological phosphorus removal, much less alum, at a cost of \$1.30 a gallon, **MAY** be possible.

### **2017 Objectives**

- Accommodate iron filter backwash waste by relaying sewer along Kettle Moraine Dr., Buchanan St., and Lawndale Ave.
- Continue clay sewer lining for old clay sanitary sewer lines.
- Continue with annual system cleaning, and populating data for our GIS map.
- Continue studying wastewater treatment operations to determine phosphorous reductions available within the current treatment facility.
- Complete the purchase of a jet vac truck for use with sewer, storm, and water departments as approved by the Village Board on October 17, 2016.

**Staffing**

Position	FTE (Full-Time Equivalent)
Superintendent of Utilities	1
Utility Operator	2

**Salary and Wage Distributions**

The Superintendent of Utilities earns an annual salary of \$73,050. This amount is divided as follows:

Electric Utility	20%
Sewer Utility	35%
Water Utility	30%
Stormwater Utility	5%
Central Equipment	10%

The two utility operators' wages range from \$46,800 to \$52,603 annually. This amount is located under "Operations Labor", in addition to the amounts projected for overtime and on-call pay.

In addition to the staff assigned to this department, the Sewer Utility pays 20% of the Administrator's salary, 20% of the Engineer's salary, 20% of the Treasurer's salary and 10% of the Deputy Treasurer's wages.

**Account Detail**

42410-635 – Sewer Impact Fees: This account was created in 2010 to more accurately track the amount of impact fees paid for connections to the sanitary sewer system. The money received in this account is transferred to the Sewer Utility's Debt Retirement Fund to support debt repayment for system upgrades and expansions.

46410-449 – Other System Sales: This represents the service provided to the Hilldale Sanitary District.

46410-465 – Outside Haulers Sales: This account tracks the charges paid by private sewage and septic companies to deposit waste at the WWTP.

46411-456 – Other Operating Income: This account monitors a fee that was created in 2014 based on recommendations made during the 2007 Sewer Utility system study.

53610-820 – Operations Labor: This account now contains all regularly scheduled labor costs associated with WWTP staff. Previously, portions of this cost were located within the various maintenance accounts.

53610-827 – Operations Supplies & Expense: This account pays such costs as lab supplies, permit testing costs, filters, small tools and equipment and miscellaneous supplies.

53610-828 – Central Equipment Expense: This amount includes the fee paid by the Sewer Utility to the Central Equipment fund for the use of municipally owned vehicles and equipment.

53611-831 – Maintenance of Collection System: This item covers the expenses associated with the upkeep of the systems lift stations, manholes and mains. This account also pays any costs related to Diggers Hotline locations.

53611-833 – Maintenance of Treatment Equipment: This amount is for the upkeep of equipment items located at the WWTP.

53611-834 – Maintenance of General Plant: This category includes costs associated with the actual plant, including the generator and grounds maintenance.

53613-851 – Central Services & Building: This account pays the utility's fee to the Central Services account for administrative support services.

53613-852 – Outside Services: This item includes the utility's annual audit and mapping expenses. The large increase shown in this account is due to the costs expected for evaluation of the utility's options for addressing the EPA and DNR phosphorus regulations.

53613-855 – Regulatory Expense: This category is for costs associated with obtaining necessary permits from the Department of Natural Resources (DNR).

53613-857 – Rent of Meters: This amount is paid to the Water Utility for the use of its metering system.

**2017 PROPOSED BUDGET  
SEWER UTILITY - FUND 72**

		<b>2015 ACTUAL 12/31/2015</b>	<b>2016 ACTUAL 7/31/2016</b>	<b>2016 PROJECTED YEAR-END</b>	<b>2016 AMENDED BUDGET</b>	<b>2017 PROPOSED BUDGET</b>	<b>%CHANGE BUDGET</b>
720-42410-000-635	SEWER IMPACT FEES	193,824.00	113,136.00	240,800.00	72,240.00	105,000.00	45.35%
720-46410-000-440	RESIDENTIAL SALES	634,966.93	325,754.74	675,473.33	656,250.00	683,000.00	4.08%
720-46410-000-441	MULTI-FAMILY SALES	17,548.70	8,984.80	18,491.49	25,200.00	20,000.00	-20.63%
720-46410-000-442	COMMERCIAL SALES	234,075.89	117,317.41	245,598.88	252,000.00	246,000.00	-2.38%
720-46410-000-443	INDUSTRIAL SALES	25,222.62	11,279.00	23,616.41	27,300.00	26,000.00	-4.76%
720-46410-000-449	OTHER SYSTEM SALES	155,811.69	76,972.92	153,080.23	157,500.00	163,800.00	4.00%
720-46410-000-464	PUBLIC AUTHORITY SALES	49,470.47	25,220.42	50,440.84	52,500.00	53,000.00	0.95%
720-46410-000-465	OUTSIDE HAULERS SALES	114,553.21	58,307.54	116,615.08	110,000.00	120,000.00	9.09%
720-46411-000-450	FORFEITED DISCOUNTS	3,372.03	1,779.14	3,558.28	4,200.00	3,500.00	-16.67%
720-46411-000-456	OTHER OPERATING INCOME	1,381.50	1,266.00	2,532.00	2,500.00	2,500.00	0.00%
720-46412-000-419	SEWER INTEREST INCOME	(382.90)	513.77	1,027.54	7,500.00	1,000.00	-86.67%
720-46412-000-420	SEWER SPECIAL FUND INTEREST	7,430.18	8,823.41	12,712.35	3,000.00	10,000.00	233.33%
720-46412-000-421	CONTRIBUTED CAPITAL	329,728.13	-	-	-	-	
720-48125-000-000	GAIN ON INVESTMENTS	-	(2.66)	(5.32)	-	-	
720-48130-000-000	UNREALIZED GAIN ON INVESTMENTS	-	6,433.68	12,867.36	-	-	
<b>TOTAL REVENUES</b>		<b>1,767,002.45</b>	<b>755,786.17</b>	<b>1,556,808.47</b>	<b>1,370,190.00</b>	<b>1,433,800.00</b>	<b>4.64%</b>

**2017 PROPOSED BUDGET  
SEWER UTILITY - FUND 72**

		2015 ACTUAL 12/31/2015	2016 ACTUAL 7/31/2016	2016 PROJECTED YEAR-END	2016 AMENDED BUDGET	2017 PROPOSED BUDGET	%CHANGE BUDGET
720-53610-000-820	OPERATIONS LABOR	125,825.15	65,150.77	130,301.54	97,155.96	130,302.00	34.12%
720-53610-000-821	POWER FOR PUMPING	123,379.03	59,550.75	102,087.00	98,000.00	88,000.00	-10.20%
720-53610-000-825	SLUDGE HAULING & EXP	31,019.10	-	36,000.00	36,000.00	36,000.00	0.00%
720-53610-000-826	CHEMICALS	34,427.97	21,313.58	60,000.00	60,000.00	30,000.00	-50.00%
720-53610-000-827	OPERATIONS SUPPLIES & EXP	44,791.27	23,195.55	39,763.80	44,768.00	45,000.00	0.52%
720-53610-000-828	CENTRAL EQUIPMENT EXPENSE	50,340.00	31,676.00	63,352.00	63,352.00	67,928.00	7.22%
720-53611-000-831	MAINT OF COLL SYSTEM	55,974.91	12,516.05	35,000.00	35,000.00	40,000.00	14.29%
720-53611-000-833	MAINT OF TREATMENT EQUIP	52,886.13	21,979.95	37,679.91	40,000.00	45,000.00	12.50%
720-53611-000-834	MAINT OF GEN PLANT	9,479.57	1,303.04	6,000.00	10,000.00	8,000.00	-20.00%
720-53612-000-840	ACCT & COLLECTION LABOR	-	-	-	4,071.00	see admin	
720-53612-000-843	UNCOLLECTIBLE ACCTS	1,005.45	796.13	796.13	-	-	
720-53613-000-850	ADMIN & GEN SALARIES	63,500.78	34,202.26	58,632.45	53,436.00	58,633.00	9.73%
720-53613-000-851	CENTRAL SERVICES & BUILDING	47,580.00	23,790.00	47,580.00	47,580.00	51,392.00	8.01%
720-53613-000-852	OUTSIDE SERVICES	18,786.19	4,648.08	17,968.14	20,000.00	40,000.00	100.00%
720-53613-000-853	INSURANCE EXP	11,124.74	10,389.00	10,389.00	13,389.00	14,728.00	10.00%
720-53613-000-854	EMPLOYEE PEN & BENEFITS	81,684.01	37,080.98	63,567.39	44,794.98	75,367.00	68.25%
720-53613-000-855	REGULATORY EXP	4,421.35	4,302.55	5,000.00	5,000.00	5,000.00	0.00%
720-53613-000-856	TRAINING & MEETINGS	1,231.67	536.93	2,000.00	2,000.00	2,000.00	0.00%
720-53613-000-857	RENT OF METERS	5,613.86	-	7,500.00	7,500.00	7,500.00	0.00%
720-53614-000-403	DEPRECIATION EXPENSE	530,519.74	525,636.00	525,636.00	516,403.00	525,636.00	1.79%
720-53614-000-408	TAXES	16,074.50	7,150.44	12,257.90	11,832.61	14,454.00	22.15%
720-53614-000-427	INTEREST EXPENSE	161,227.69	52,523.20	153,546.29	153,547.00	143,599.00	-6.48%
720-53840-000-903	ADMIN & FINANCE EXPENSES	435.92	880.34	1,509.15	-	2,000.00	
720-53860-000-505	LOSS ON INVESTMENTS	83.28	-	-	-	-	
720-53860-000-510	UNREALIZED LOSS ON INVESTMENTS	2,555.74	-	-	-	-	
<b>TOTAL EXPENDITURES</b>		<b>1,473,968.05</b>	<b>938,621.60</b>	<b>1,416,566.71</b>	<b>1,363,829.55</b>	<b>1,430,539.00</b>	<b>4.89%</b>
<b>REVENUES OVER EXPENDITURES</b>		<b>293,034.40</b>	<b>(182,835.43)</b>	<b>140,241.76</b>	<b>6,360.45</b>	<b>3,261.00</b>	